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## 5.7 WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BEST MANAGEMENT PRACTICES

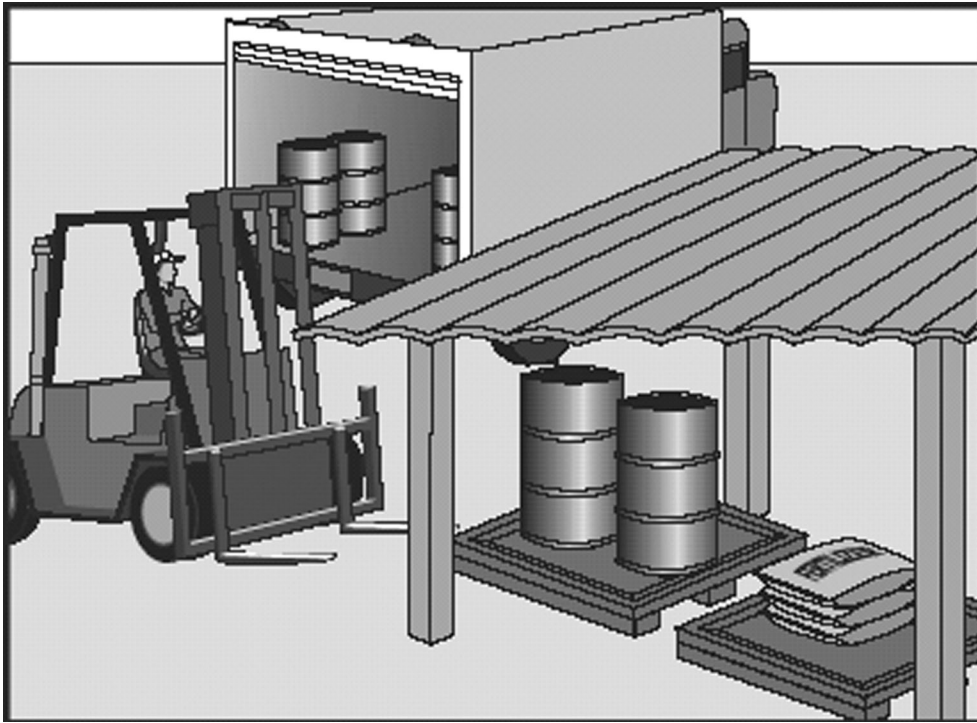
Waste management and materials pollution control BMPs, like non-storm water management BMPs, are source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with storm water. These BMPs also involve day-to-day operations of the construction site and are under the control of the contractor, and are additional “good housekeeping practices”, which involve keeping a clean, orderly construction site and include the following:

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Materials pollution (also called materials handling) consists of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into storm water discharges. The objective is to reduce the opportunity for rainfall to come in contact with these materials. These controls shall be implemented for all applicable activities, material usage and site conditions. Materials handling practices include the following BMPs:

- Material Delivery, Storage;
- Material Use; and
- Stockpile Management.

## Material Delivery and Storage



### 5.7.1 Material Delivery and Storage

#### Definition

Procedures and practices for the proper handling, delivery, and storage of construction materials at the construction site.

#### Purpose

- To minimize the risk of discharge from leaks and spills of construction site materials into storm drain system or watercourses.

#### Appropriate Applications

Following materials that are stored on construction site:

- Soil
- Pesticides and herbicides
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil and grease
- Asphalt and bitumens
- Hazardous chemicals such as acids, lime, glues, adhesives, paints, solvents, and curing compounds

- Concrete compounds
- Other materials that may be detrimental if released to the environment

### **Limitations**

- Space limitation may preclude indoor storage.
- Storage sheds must meet building and fire code requirements.

### **Standards and Specifications**

#### **General**

- Train employees and subcontractors on the proper material delivery and storage practices.
- Temporary storage area shall be located away from vehicular traffic.
- Material Safety Data Sheets (MSDS) shall be supplied to the Engineer for all materials stored.

#### **Material Storage Areas and Practices**

Liquids and petroleum products shall be handled in conformance with the following provisions.

- Storage, preparation, and mixing shall be accomplished in temporary containment facilities. Each temporary containment facility shall provide a spill containment volume equal to 1.5 times the volume of all containers therein and shall be impervious to the materials contained therein for a minimum contact time of 72 hours.
- Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.
- To provide protection from wind and rain, temporary containment facilities shall be covered during non-working days and prior to rain events.
- Temporary containment facilities shall be maintained free of accumulated rainwater and spills.
- Materials shall be stored in their original containers and the original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.
- Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground.
- Stockpiles shall be protected in accordance with BMP “Stockpile Management.”

# Material Delivery and Storage

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- Minimize the material inventory stored on site by maintaining only a few days supply.
- Store material indoors when available.
- Post proper storage instructions in conspicuous locations near storage areas.
- Do not store hazardous drums, boxes, or bagged materials directly on the ground. Place these items on pallets and, when possible, under cover in a secondary containment.
- Maintain ample supply of appropriate spill clean up material near storage areas.
- Use proper devices to transfer chemicals from one container to another.
- Follow manufacturer's instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals.

## Material Delivery Practices

- Employees trained in emergency spill clean-up procedures shall be present when dangerous materials or liquid chemicals are unloaded.
- Keep an accurate, up-to-date inventory of material delivered and stored on-site.
- Chemical and material storage areas shall be located away from low areas, drainages and stream banks, and outside the 100-year flood level.

## Spill Clean-up

- Contain and clean up any spill immediately.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose any hazardous material or contaminated soil.

## Inspections

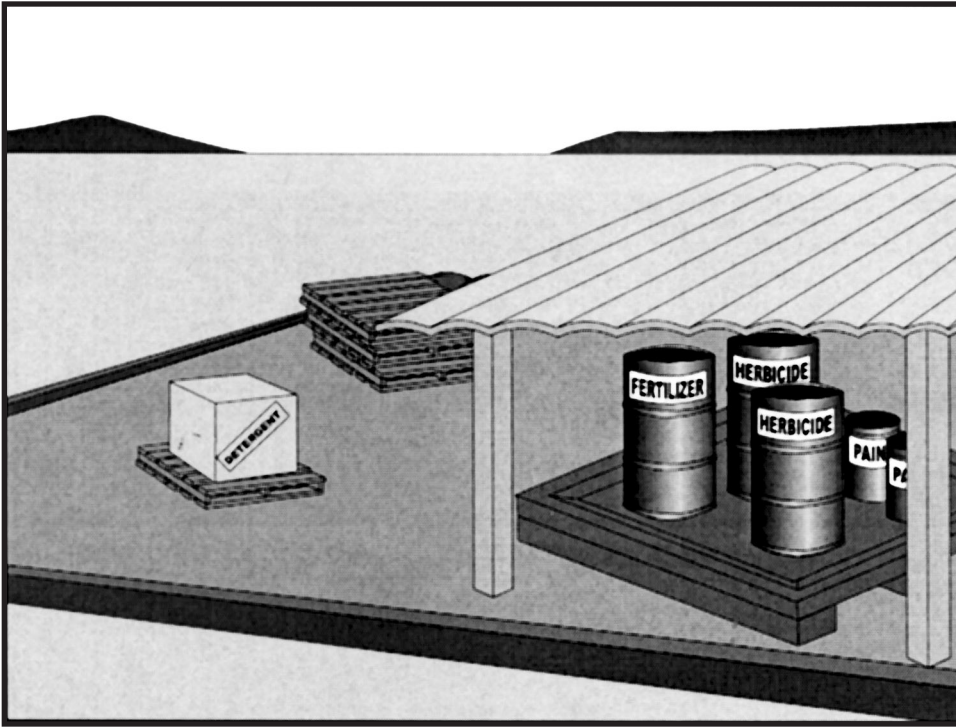
- Containers and storage areas shall be inspected weekly for spills and damage.
- Inspect before and after rainfall events.

## Maintenance

- Storage areas shall be maintained to prevent rainfall and runoff from coming in contact with chemicals or materials.
- Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.
- Clean areas where materials have been removed to insure that no dust or spillage remains to be washed into storm water.



## Material Use



### 5.7.2 Material Use

#### Definition and Purpose

- These are procedures and practices for use of construction material in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or watercourse.

#### Appropriate Applications

This BMP applies to all construction projects. These procedures apply when the following materials are used or prepared on site:

- Pesticides and herbicides
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil, and grease
- Asphalt and other concrete components
- Hazardous chemical such as acids, lime, glues, adhesives, paints, solvents, and curing compounds
- Concrete compounds
- Other materials that may be detrimental if released to the environment

### **Limitations**

- Safer alternative building and construction products may not be available or suitable in every instance.

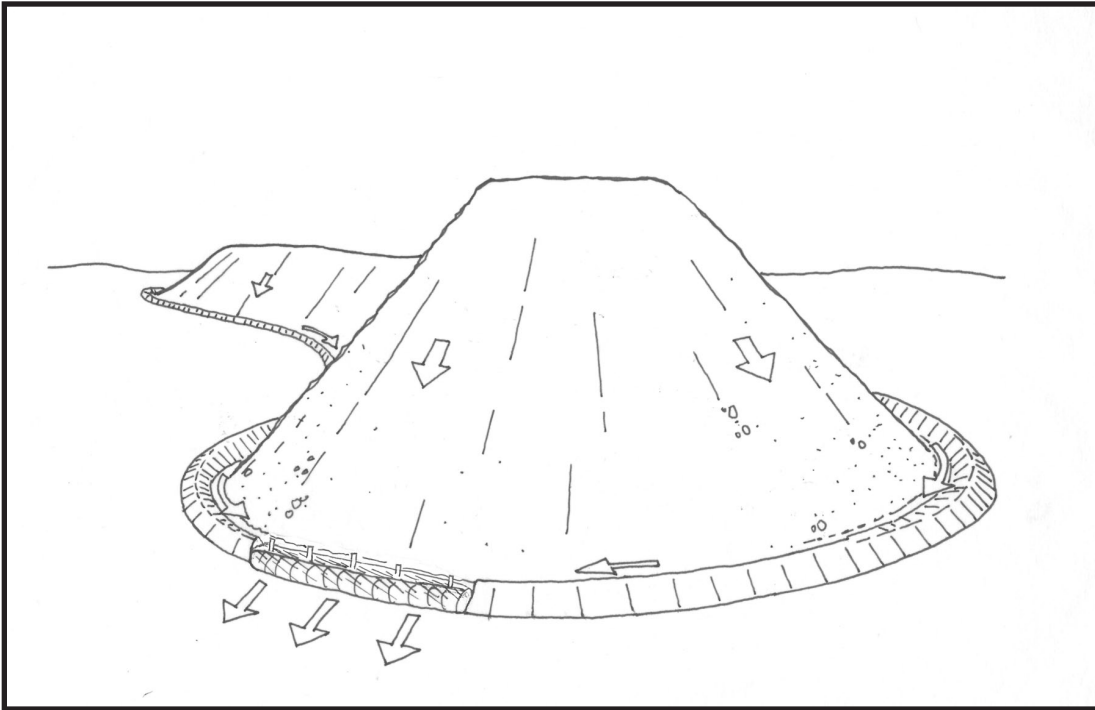
### **Standards and Specifications**

- Material Safety Data Sheets (MSDS) shall be supplied to the Engineer for all materials.
- Latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths, when thoroughly dry and are no longer hazardous, may be disposed of with other construction debris.
- Do not remove the original product label, it contains important safety and disposal information. Use the entire product before disposing of the container.
- Mix paint indoors, or in a containment area. Never clean paintbrushes or rinse paint containers into a street, gutter, storm drain or watercourse. Dispose of any paint thinners, residue and sludge(s), that cannot be recycled, as hazardous waste.
- For water-based paint, clean brushes to the extent practical, and rinse to a drain leading to a sanitary sewer where permitted, or into a concrete washout pit or temporary sediment trap. For oil-based paints, clean brushes to the extent practical and filter and reuse thinners and solvents.
- Use recycled and less hazardous products when practical. Recycle residual paints, solvents, non-treated lumber, and other materials.
- Use materials only where and when needed to complete the construction activity. Use safer alternative materials as much as possible. Reduce or eliminate use of hazardous materials on-site when practical.
- Do not over-apply fertilizers and pesticides. Prepare only the amount needed. Strictly follow the recommended usage instructions. Apply surface dressings in smaller applications, as opposed to large applications, to allow time for it to work in and to avoid excess materials being carried off-site by runoff.
- Application of herbicides and pesticides shall be performed by a licensed applicator.
- Contractors are required to complete the “Report of Chemical Spray Forms” when spraying herbicides and pesticides.
- Keep an ample supply of spill clean up material near use areas. Train employees in spill clean up procedures.
- Avoid exposing applied materials to rainfall and runoff unless sufficient time has been allowed for them to dry.
- Comply with all pertinent Federal Regulations.

### **Maintenance and Inspections**

- Spot check employees and subcontractors monthly throughout the job to ensure appropriate practices are being employed.

# Stockpile Management



## 5.7.3 Stockpile Management

### Definition

Procedures and practices to reduce or eliminate storm water contact with construction site stockpiles of soil and paving materials such as concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate subbase or premixed aggregate, and asphalt minder (“cold mix” asphalt).

### Purpose

- To reduce or eliminate pollution of storm water from stockpiles

### Appropriate Applications

- Implement on all projects that stockpile soil and paving materials

### Standards and Specifications

- Locate stockpiles away from concentrated flows of storm water, drainage courses, and inlets.
- Protect all stockpiles from storm water run-on using a temporary perimeter sediment barrier such as berms, dikes, silt fences, or sandbag barriers.
- Cover or protect with soil stabilization measures if rain is predicted.
- Implement wind erosion practices as appropriate.

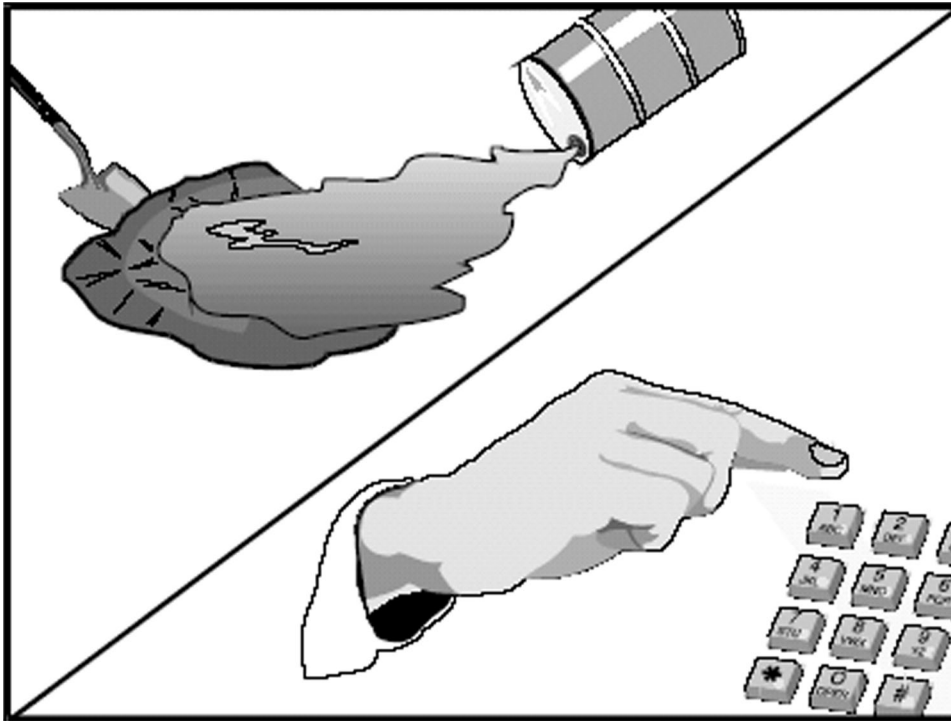


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- “Cold mix” stockpiles shall be placed on and covered with plastic or comparable material at all times.

**Maintenance**

- Repair and/or replace perimeter controls and covers as needed or as directed by the Engineer.

## Spill Prevention and Control



### 5.7.4 Spill Prevention and Control

#### Definition and Purpose

Procedures and practices implemented to prevent and control spills in a manner that minimizes discharges of spilled materials to the drainage system or watercourse.

#### Appropriate Applications

- Required for all construction activities. Spill control procedures are implemented anytime chemicals and/or hazardous substances are stored.

#### Limitations

- This BMP description is very general. The contractor must identify appropriate practices for the specific materials used or stored on-site.

#### Standards and Specifications

- A spill prevention and control plan shall be developed for the project and implemented throughout construction. The plan should include:
  - Procedures for storage and use that will prevent spills.
  - Procedures for spill clean up including minor and significant/hazardous spills..
  - Procedures for the containment of spills.

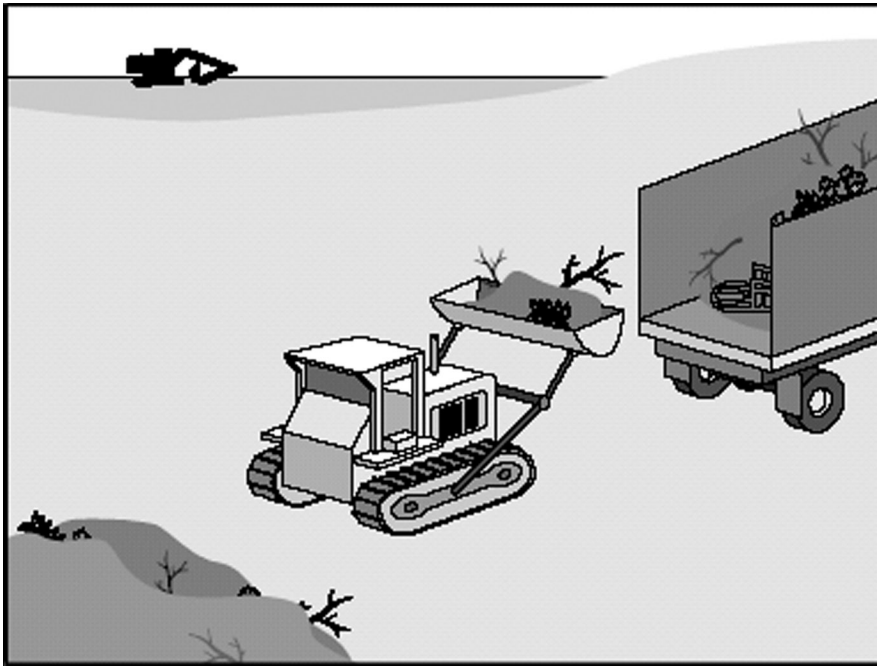
Procedures for the disposal of spilled materials and the material used for clean up.  
Employee education programs.

- Water used for cleaning and decontamination shall not be allowed to enter storm drains nor watercourses and shall be collected and disposed of as described in BMP “Liquid Waste Management.”
- The 24-hour direct access to ADEQ’s Emergency Response Duty Office is (602) 771-2330 or toll free at (800) 234-5677.
- Information for the handling of potential pollutants on construction sites is available from ADEQ Waste Management Program.
- General Information: Patty Sharit (602) 771-4153

### **Maintenance and Inspection**

- Verify weekly that spill control clean up materials are located near material storage, unloading and use areas.
- To prevent spills do regular preventive maintenance on tanks and fuel lines.
- Update spill prevention and control plan if changes occur in the types of chemicals on site.

# Solid Waste Management



## 5.7.5 Solid Waste Management

### Definition

The regular collection and disposal of accumulated solid wastes generated at a construction site.

### Purpose

- To control a major cause of pollution on construction sites.
- To prevent the contamination of storm water from stockpiled waste materials.
- To prevent the clogging of storm drain systems.

### Appropriate Applications

- Required for all construction projects that generate solid waste such as construction wastes (brick, pavement, timber), vegetative material and litter.

### Standards and Specifications

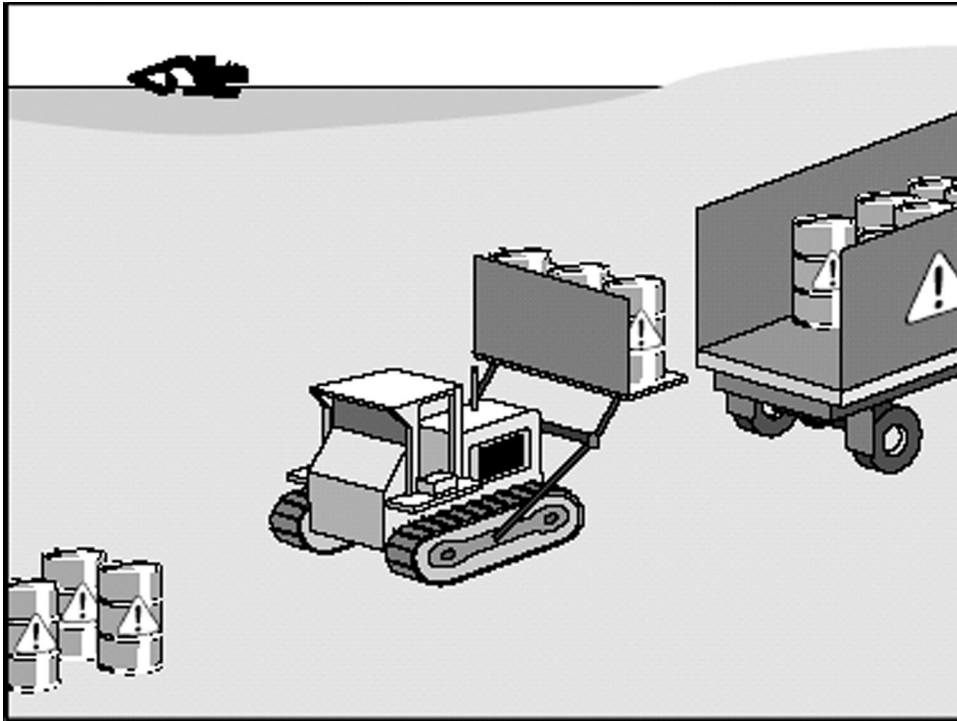
- The Contractor's Erosion Control Coordinator shall oversee and enforce proper solid waste procedures and practices.
- Material that is to be stockpiled or disposed of offsite shall be in accordance with Subsection 107.11.

- Solid waste storage areas shall be located at least 50 feet from drainages and shall not be located in areas prone to flooding or ponding.
- Divert storm water away from stored solid waste with temporary berms or dikes or by other means.
- Plan the frequency of disposal to remove solid waste before it accumulates beyond the capacity of the on-site facilities.
- Place on-site facilities in convenient locations.
- Prohibit littering by employees, subcontractors and visitors. Litter from work areas within the construction limits of the project shall be collected and placed in watertight dumpsters at least weekly regardless of whether the litter was generated by the contractor, the public or others.
- Watertight trash receptacles shall be provided in the contractor's yard, field trailer areas and other locations where workers congregate for lunch and break periods.
- Dumpster washout on the project site is not permitted.
- Notify trash-hauling contractors that only watertight dumpsters are permitted for use on project site.
- Disposal of construction debris and all domestic garbage must be coordinated with the local jurisdiction.
- Consider using inert waste material as fill.
- Consider separating green waste to be composted and used as mulch.

### **Inspections and Maintenance**

- Check for and remove litter and debris from drainage grates and other drainage structures.
- Regular on-site trash collection.
- Regular maintenance of trash containers and dumpsters.
- Provide cover for dumpsters and waste containers to prevent entry of rainwater and loss of contents by high winds.

# Hazardous Waste Management



## 5.7.6 Hazardous Waste Management

### Definition

The planning and practice to meet the requirements for handling hazardous waste materials on a construction site.

### Purpose

- To control the release of hazardous materials.
- To prevent the contamination of storm water.
- To prevent a delay in the project schedule due to environmental investigations/enforcement actions.

### Appropriate Applications

- Required for all construction activities that use hazardous materials and generate hazardous waste. Hazardous wastes area generated from the use of:
  - Petroleum products
  - Concrete curing compounds
  - Septic wastes
  - Paints and stains
  - Wood preservatives

Asphalt products

Pesticides

Acids

Solvents

Roofing tar

Any materials deemed hazardous waste in Arizona.

- In the event of a spill of a hazardous material, the contractor shall follow the provisions of Subsection 107.07. In addition, the Erosion Control Coordinator shall modify the SWPPP as necessary within 14 calendar days to include a description of the release, the circumstances leading to the release, and the date of the release.
- The contractor shall assist in any efforts to clean up hazardous material spills, as directed by the Engineer or other authorities. Soil contaminated from spills shall be disposed of according to applicable state and federal regulations.

### **Standards and Specifications**

- Contractor must comply with all federal, state and local laws regarding hazardous materials on a construction site.
- Educate employees and subcontractors on hazardous waste storage and disposal procedures.
- Identify hazardous materials that will be needed on the construction site and plan for storage, use and disposal.
- Designate hazardous waste storage areas on site away from storm drains or watercourses and away from moving vehicles and equipment.
- Segregate hazardous waste from non-hazardous construction site debris.
- Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drum or similar) and under cover.
- Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.
- Dispose of waste within 90 days of being generated or as directed by the Engineer.
- Information about the requirements for the handling of hazardous waste on construction sites is available from the Arizona Department of Environmental Quality Waste Management Program.
  - General Information: Patty Sharit (602) 771-4153
- The 24-hour ADEQ Emergency Response Duty Office number is (602) 771-2330 or toll free (800) 234-5677.
- The National Response Center (800-424-8802) shall be notified of spills of Federal reportable quantities.

# Hazardous Waste Management

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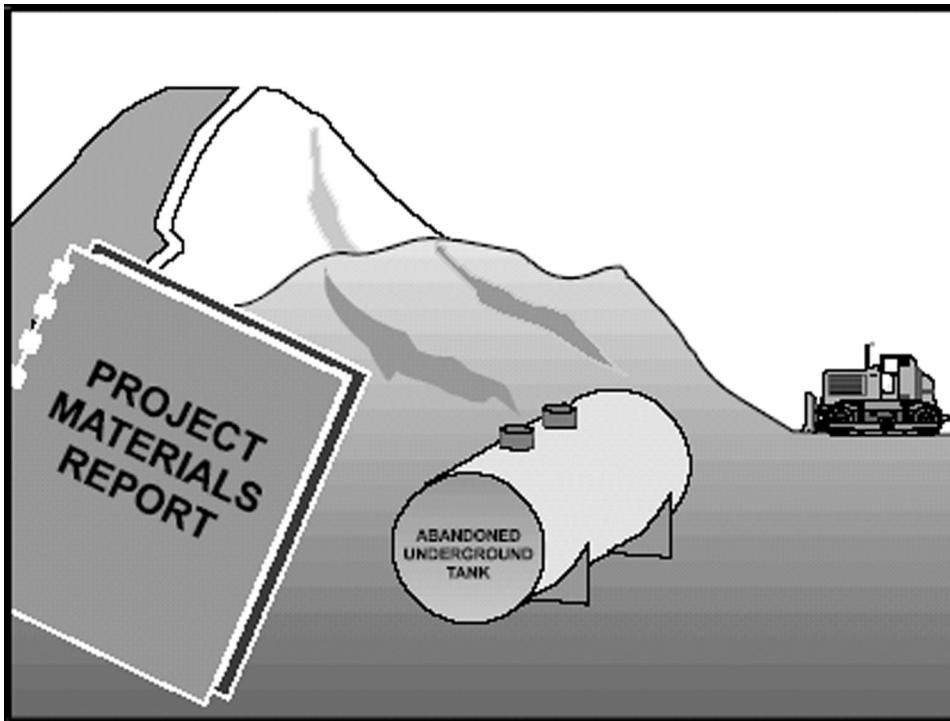
## **Inspections and Maintenance**

- The contractor's Erosion Control Coordinator shall monitor on-site hazardous waste storage and disposal procedures.
- Maintain a clean and orderly work environment.
- Maintain careful records of the storage, handling and disposal of hazardous materials.
- Perimeter controls, containment structures, covers and liners shall be inspected on a weekly basis and immediately repaired or replaced as needed.





# Contaminated Soil Management



## 5.7.7 Contaminated Soil Management

### Definition and Purpose

These are procedures and practices to minimize or eliminate the discharges of pollutants to the drainage system or to watercourses from contaminated soil.

### Appropriate Applications

- Contaminated soil management is implemented on construction projects in highly urbanized or industrial areas where soil contamination may have occurred due to spills, illicit discharges, and leaks from underground storage tanks.
- It may also apply to highway widening projects in older areas where median and shoulder soils may have been contaminated by aerially deposited lead (ADL).

### Limitations

- The procedures and practices presented in this BMP are general. The contractor shall identify appropriate practices and procedures for the specific contaminants known to exist or discovered on site.

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## Standards and Specifications

### Identifying Contaminated Areas

- Contaminated soils are often identified during project planning and development with known locations identified in the plans and specifications. The contractor shall review applicable reports and investigate appropriate call-outs in the plans and specifications.
- The contractor may further identify contaminated soils by investigating:
  - Past site uses and activities;
  - Detected or undetected spills and leaks; and
  - Acid or alkaline solutions from exposed soil or rock formations high in acid or alkaline forming elements.
- Look for contaminated soil as evidenced by discoloration, odors, differences in soil properties, abandoned underground tanks or pipes, or buried debris. Test suspected soils at a certified laboratory.

### Education

- Prior to performing any excavation work at the locations containing material classified as hazardous, employees and subcontractors shall complete a safety training program covering the potential hazards as identified.
- Educate employees and subcontractors in identification of contaminated soil and on contaminated soil handling and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).

### Handling Procedures for Material and Aerially Deposited Lead (ADL)

- Materials from areas designated as containing (ADL) may, if allowed by the contract special provisions, be excavated, transported, and used in the construction of embankments and/or backfill.
- Excavation, transportation, and placement operations shall result in no visible dust.
- Use caution to prevent spillage of lead containing material during transport.
- Monitor the air quality during excavation of soils contaminated with lead.

### Handling Procedures for Contaminated Soils

- Test suspected soils at an approved certified laboratory.
- If the soil is contaminated, work with the local regulatory agencies to develop options for treatment and/or disposal.

# Contaminated Soil Management

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- Avoid temporary stockpiling of contaminated soils or hazardous material.
- If temporary stockpiling is necessary:
  - Cover the stockpile with plastic sheeting or tarps;
  - Install a berm around the stockpile to prevent runoff from leaving the area; and
  - Do not stockpile in or near storm drains or watercourses.
- Contaminated material and hazardous material on exteriors of transport vehicles shall be removed and placed either into the current transport vehicle or the excavation prior to the vehicle leaving the exclusion zone.
- Monitor the air quality continuously during excavation operations at all locations containing hazardous material.
- Procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work, including registration for transporting vehicles carrying the contaminated material and the hazardous material.
- Collect water from decontamination procedures and treat and/or dispose of it at appropriate disposal site.
- Collect non-reusable protective equipment, once used by any personnel, and dispose of at an appropriate disposal site.
- Install temporary security fence to surround and secure the exclusion zone. Remove fencing when no longer needed.
- Excavation, transport, and disposal of contaminated material and hazardous material shall be in accordance with the rules and regulations of the following agencies (the specifications of these agencies supersede the procedures outlined in this BMP):
  - U.S. Department of Transportation (USDOT);
  - U.S. Environmental Protection Agency (USEPA);
  - Arizona Department of Environmental Quality (ADEQ);
  - Arizona Division of Occupation Safety and Health Administration; and
  - Local regulatory agencies.

## Procedures for Underground Storage Tank Removals

- Prior to commencing tank removal operations, obtain the required underground storage tank removal permits and approval from the federal, state, and local agencies which have jurisdiction over such work.
- Arrange to have tested, as directed by the Engineer, any liquid or sludge found in the underground tank prior to its removal to determine if it contains hazardous substances.
- Following the tank removal, take soil samples beneath the excavated tank and perform analysis as required by the local agency representative(s).

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- The underground storage tank, any liquid and/or sludge found within the tank, and all contaminated substances and hazardous substances removed during the tank removal shall be transported to disposal facilities permitted to accept such waste.

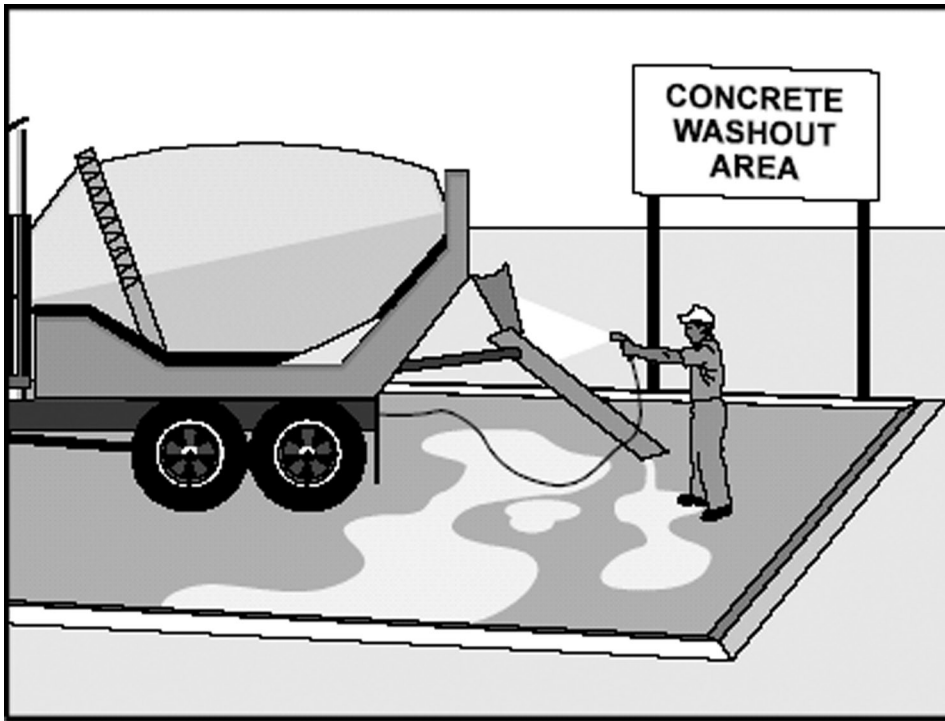
#### Water Control

- Take all necessary precautions and preventive measures to prevent the flow of water, including ground water, from mixing with hazardous substances or underground storage tank excavations. Such preventative measures may consist of, but are not limited to: berms, cofferdams, grout curtains, freeze walls, and seal course concrete or any combination thereof.
- If water does enter an excavation and becomes contaminated, such water, when necessary to proceed with the work, shall be discharged to clean, closed top, watertight holding tanks, treated, and disposed of in accordance with federal, state, and local laws.

#### Inspections and Maintenance

- The Contractor's Erosion Control Coordinator and/or construction supervisor shall monitor on-site contaminated soil storage and disposal procedures.
- Monitor air quality continuously during excavation operations at all locations containing hazardous material.
- Coordinate contaminated soils and hazardous substances/waste management with the appropriate federal, state, and local agencies.
- Inspect hazardous waste receptacles and areas regularly.

## Concrete Waste Management



### 5.7.8 Concrete Waste Management

#### Definition and Purpose

A temporary pit or bermed area for washout of concrete trucks, tools, mortar mixers, etc., to prevent fresh concrete or cement-laden mortar to enter a storm drainage system and/or receiving water.

#### Appropriate Applications

- Where concrete is used as a construction material or where concrete dust and debris result from demolition activities.
- Where slurries containing Portland cement concrete (PCC) or asphalt concrete (AC) are generated, such as from saw-cutting, coring, grinding, milling, grooving, and hydro-concrete demolition.
- Where concrete trucks and other concrete-coated equipment are washed on site, when approved the Engineer.

#### Limitations

- None identified.

### **Standards and Specifications**

- Educate employees, subcontractors and suppliers on the concrete waste management techniques described herein.

#### **Concrete Slurry Wastes:**

- PCC and AC wastes shall not be permitted to enter storm drains or watercourses. Place temporary berms, sandbags or other BMPs around construction activity to capture and contain slurry runoff.
- PCC and AC wastes shall be collected and properly disposed of outside the highway right-of-way.
- Below-grade facilities are typical.
- Vacuum slurry residues and dispose in a temporary pit and allow to dry. Dispose of dry slurry residue properly.

#### **On-site Temporary Concrete Washout Facility, Transit Truck Washout Procedures:**

- Temporary concrete washout facilities shall be located a minimum of 50 feet from storm drain inlets, open drainage facilities and watercourses, unless determined unfeasible by Engineer. Each facility shall be located away from construction traffic or access areas to prevent disturbance or tracking.
- Temporary concrete washout facilities shall have a temporary pit (below grade) or bermed area (above grade) of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures. If located above grade, the washout area shall be lined with an impermeable material.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed and disposed of per BMP "Solid Waste Management."

#### **On-site Temporary Concrete Washout Facility, Transit Truck Washout Procedures:**

- When temporary concrete washout facilities are no longer required for the work, as determined by the Engineer, the hardened concrete shall be removed and properly disposed of. Materials used to construct temporary concrete washout facilities shall be the property of the contractor, shall be removed from the site of the work and shall be disposed of outside the highway right-of-way.
- Holes, depressions or other ground disturbance caused by the removal of the facilities shall be backfilled and repaired.

# Concrete Waste Management

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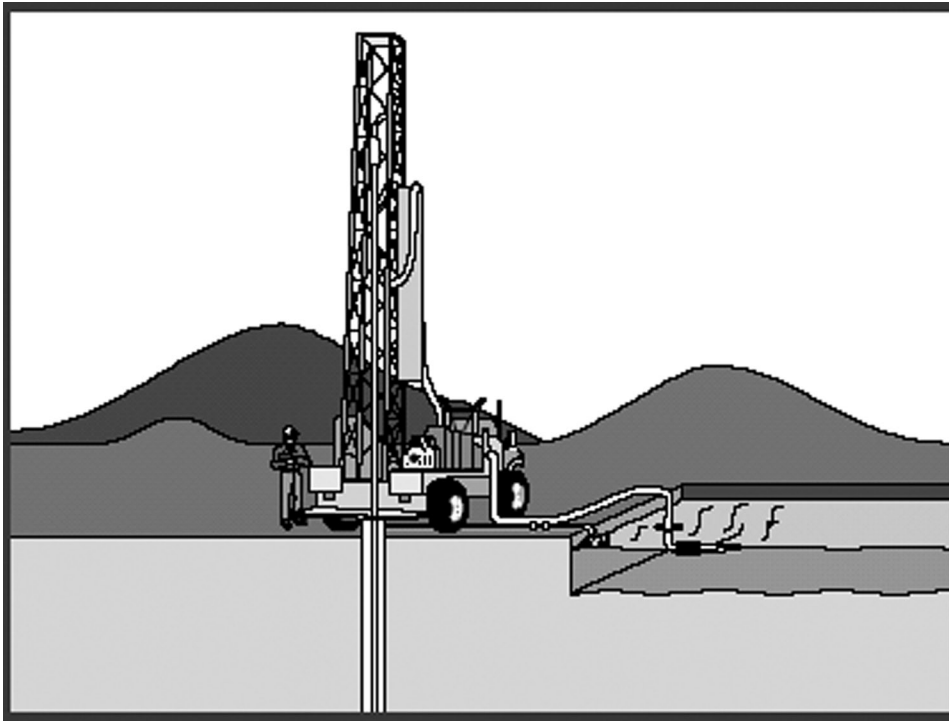
## **Inspections and Maintenance**

- The contractor's Erosion Control Coordinator shall monitor on-site concrete waste storage and disposal procedures at least weekly.
- Temporary concrete washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 4 inches for above grade facilities and 12 inches for below grade facilities. Maintenance shall include removing and disposing of hardened concrete and returning the facilities to a functional condition.





# Liquid Waste Management



## 5.7.9 Liquid Waste Management

### Definition and Purpose

Procedures and practices to prevent discharge of pollutants to the storm drain system or to watercourses as a result of the creation, collection, and disposal of non-hazardous liquid wastes.

### Appropriate Applications

Liquid waste management is applicable to construction projects that generate any of the following non-hazardous byproducts, residuals, or wastes, such as:

- Drilling slurries and drilling fluids
- Grease-free and oil-free wastewater and rinse water
- Dredgings
- Other non-storm water liquid discharges not permitted by separate permits.

### Limitations

- Disposal of some liquid wastes may be subject to specific laws and regulations, or to requirements of other permits secured for the construction project.
- Does not apply to dewatering operations (see BMP “Dewatering Operations”), solid waste management (see BMP “Solid Waste Management”), hazardous wastes (see BMP “Hazardous Waste Management”), or concrete slurry residue (see BMP “Concrete Waste Management”).

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- Does not apply to non-storm water discharges permitted by any ADEQ permit held by the pertinent ADOT District, unless the discharge is determined by ADOT to be a source of pollutants. Typical permitted non-storm water discharges can include: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; flows from riparian habitats and wetlands; and, discharges or flows from emergency fire fighting activities.

## **Standards and Specifications**

### **General Practices**

- The Contractor's Erosion Control Coordinator shall oversee and enforce proper liquid waste management procedures and practices.
- Instruct employees and subcontractors how to safely differentiate between non-hazardous liquid waste and potential or known hazardous liquid waste.
- Instruct employees, subcontractors, and suppliers that it is unacceptable for any liquid waste to enter any storm drainage device, waterway, or receiving water.
- Educate employees and subcontractors on liquid waste generating activities, and liquid waste storage and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- Verify which non-storm water discharges are permitted by the ADOT Statewide AZPDES permit; different regions might have different requirements not outlined in this permit. Some listed discharges may be prohibited if ADOT determines the discharge to be a source of pollutants.
- Apply the "Vehicle and Equipment Cleaning" BMP for managing wash water and rinse water from vehicle and equipment cleaning operations.

### **Containing Liquid Wastes**

- Drilling residue and drilling fluids shall not be allowed to enter storm drains and watercourses and shall be properly disposed of outside the highway right-of-way.
- If an appropriate location is available, as determined by the Engineer, drilling residue and drilling fluids may be dried by infiltration and evaporation in a containment facility constructed in conformance with the provisions concerning the Temporary Concrete Washout Facilities detailed in BMP "Concrete Waste Management".

# Liquid Waste Management

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- Liquid wastes generated as part of an operational procedure, such as water-laden dredged material and drilling mud, shall be contained and not allowed to flow into drainage channels or receiving waters prior to treatment.
- Contain liquid wastes in a controlled area, such as a holding pit, sediment basin, roll-off bin, or portable tank.
- Containment devices must be structurally sound and leak free.
- Containment devices must be of sufficient quantity or volume to completely contain the liquid wastes generated.
- Take precautions to avoid spills or accidental releases of contained liquid wastes. Apply the education measures and spill response procedures outlined in BMP “Spill Prevention and Control”.
- Do not locate containment areas or devices where accidental release of the contained liquid can threaten health or safety, or discharge to water bodies, channels, or storm drains.

## Capturing Liquid Wastes

- Capture all liquid wastes running off a surface which has the potential to affect the storm drainage system such as wash water and rinse water from cleaning walls or pavement.
- Do not allow liquid wastes to flow or discharge uncontrolled. Use temporary dikes or berms to intercept flows and direct them to a containment area or device for capture.
- If the liquid waste is sediment laden, use a sediment trap (see BMP “Sediment Trap”) for capturing and treating the liquid waste stream, or capture in a containment device and allow sediment to settle.

## Disposing of Liquid Wastes

- Typical method is to dewater the contained liquid waste using procedures such as described in BMP “Dewatering Operations” and BMP “Desilting Basin” and dispose of resulting solids per BMP “Solid Waste Management” or per Standard Specifications for off-site disposal.
- Method of disposal for some liquid wastes may be prescribed in Water Quality Reports, AZPDES permits, Environmental Impact Reports, 401 or 404 permits, local agency discharge permits, etc., and may be defined elsewhere in the Special Provisions.
- Liquid wastes, such as from dredged material, may require testing and certification whether it is hazardous or not before a disposal method can be determined. For disposal of hazardous waste, see BMP “Hazardous Waste Management”.
- If necessary, further treat liquid wastes prior to disposal. Treatment may include, though is not limited to, sedimentation, filtration, and chemical neutralization.

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### **Inspection and Maintenance**

- Spot check employees and subcontractors at least monthly throughout the job to ensure appropriate practices are being employed.
- Remove deposited solids in containment areas and capturing devices as needed, and at the completion of the task. Dispose of any solids as described in BMP “Solid Waste Management”.
- Inspect containment areas and capturing devices frequently for damage, and repair as needed.

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